77
9
7
35
96.5

No. 20103
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Give above number, when ordering

50372

0016

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0017

10/16 05

Beech

Depth 60"
Casing full depth single
Casing 5"
Pipe 1½"
Surface water 10' below ground
Sand and Gravel
strainer [illegible] Sand
Casing riveted & soldered

Information from Mr & Mrs Beach

Material to be orderd
30 joints 5" dia No 18 Galv Iron
2 " perforated
1 " Starter
2 lbs Solder 200 rivets

0018

Content

depth 40'
Casing sodered and riveted
full depth 5" single
1½' pipe
Surface water 10' below ground
Quick sand Clay and
gravel

Information from Mrs Content

Material to be ordered for well
20 joint of No 16 galvanized
Iron telescope joints 5" dia
2 joints for spreader. 1 Starter
Steel shoe;
2 lbs solder. 150 Rivets

Soto

Depth
Casing 5"
Pipe 1½

0020

N.P. Hook

House Well 150
Cased full depth 5" single
Surface water 20' below.
In winter 3' below ground.
15' pipe strikes Yellow clay

Information by N D Hook

Well by Road
Cased full depth 105'
Casing used as pipe 4"
Yellow Clay Measure

Material to be ordered for well
50 Joints of No 18 Galvanized iron
casing 6" in dia. telescopic Joints
2 Joints perforated. 1 Stater
steel Shoe.
3 lbs Solder 375 rivets

106 ft deep

Material to be ordered for well
53 Joints of No 18 gal iron
casing 6" in dia telescopic joints
2 Joint perforated. 1 Starder
steel Shoe.
3 lbs Solder 400 rivets

(Information)

Prichard

Water 10' below
struck yellow clay
casing used as pipe 5"
depth unknown

0022

Williams

6" Casing riveted and Seated full depth 1½" pipe
Water 12' below ground
struck yellow Clay medium bored by hand

Material to be orderd
63 joints 3" dia. No 18 Galv Iron
2 Joints perforated
1 Starter.
3 lbs lead. 600 rivets
176 ft deep. 400 rivets

Information

opposite E 323

Water is below struck
yellow Clay no hard-pan

Information by J. Klotz

0024

Information

Opposit K 340

Water 30 ft below
3 ft is Boxed struck
Yellow Clay soft. Struck
Gravel from 40 to 50 ft.

Myers

Well 45' Cased full depth
5" rivited and Sodered 12" pipe
Struck yellow Clay which
got harder as it went down
Water 12' below ground

Information from Mr Myers

Material to be ordered
25 Joints. 5" dia No. 18 Galv Iron
2 " perforated
1 " Starter.
2 lbs of Solder. 175 rivets

Freeport School House

Well 90' deep. cased full
depth casing rivited and
Sodered full depth
Water 10' below ground
1½" pipe
6" Gal Irn Casing.

Information from Mr Myers

Material to be ordered
45 joints. 6" dia No.18 Galv Iron
2 " perforated
1 " Slotted
3 lbs Solder 325 rivets

M.T. Hunt Office Well

5" casing 1½" pipe
Water 12' below ground
depth unknown
This well is not be changed

Information from Mr. M.T. Hunt

House Well depth unknown
cased full depth 6" casing
no pipe Water at 18' below
ground. in boring new well
struck yellow clay Medium
Water at 10 ft below ground
5' casing

Material to be orderd.
25 joints 6" dia No 18 Galv Iron
2 " perforated
1 " Starter
2 lbs Solder & 60 rivets.

0028

Information
opposite E 140

Water 10' below ground
struck clay medium
with Hard-pan at about
18 to 20' below surface

Information by Mr. Burke

Koch
opposite E128

Water 12' below
well 40' 5" casing
cased full depth
Struck yellow clay

Information from mr Koch

Casing: Received

5"

	Starter	Perforated	Joints	Solder bars	Acid	Rivets	Charcoal	
Nov								
" 16	4	8	118	30½		3	←	08½ lb
" 17			.		1		1	Small Bottle
" 25					1			Large "
" 28			8				1	
Dec 5							8	.31½
Feb 7 1906	1	2	3					
			129					

6"

	Starter	Perforated	Joints
Nov 16	4	8	153
" 28			8 .36
			161

8"

	Starter	Perforated	Joints
Mar. ,06	1	2	61

Casing Used

5"

		Starter	Perforated	Joints	Solder bars = 1 5/8 lb	Acid	Rivets	Charcoal Sacks
November								
" 21	Beach.	1	2	25	3	.20	125	½
" 23	Content	1	2	20	3	.10	100	½
"	Myers	1	2	16	2	.20	100	1
	Williams	1	2	27	3½	.20	125	1
Feb 7 06 Jan 30 06	Stock	1	2	41	16	½	2000	4
				149				

6"

		Starter	Perforated	Joints	Solder bars	Acid	Rivets	Charcoal Sacks
November 27	Hunt	1	2	25	3	.10	125	½
December 11	Hack House Well	1	2	20	3	.10	100	¼
"	" Tank "	1	2	23	3	.20	125	1
	Freeport School							
Jan 30 06	Stock	1	2	93				
				161				

8"

J. H. Beech's Well 5" 11/21, 05. to 11/2, 05. 10 A.M. 11/21, 05.

Reported 12/23 05

Starter: .7'

1 Joint: 1.85'

Depth	Character of Soil	Thickness	Elevation	Remarks	Starter .7	Perforated 1.85	Joints 1.85	Total No. of Feet	Solder	Rivets	Acid	Charcoal	Date	Time
0.0														
	Rich Alluvial Soil	12		Medium									11/21	4/9
12														
12	Water													
				11/21 Bored 15 ft										
	Fine Sand	15		Soft										
27														
	Blue Clay	18		Cased 16 Joints Hard Bored 44 ft 11/22	1	2	14	30.3					11/22	1
45														
	Gravel	1		Cased 23 Joints Bored 46 ft Hard 11/23			7	43.25	3 bars 5 lbs		8 .10	6 each	11/23	7/9
46														
	Sand	3	Soft	Bored soft Cased 4 Joints			4	56.7					11/22	1
49														
	Blue Clay	12	Hard											
61														
	Sand			Cased Bored 61 ft									[illegible]	4/9
	Well 61 ft deep			Total	1	2	25	50.7	3	185	8 .20	1/2		4
	12.5 ft to Water			Above Surface				15				.46		
				Below				49.2						

J.S. Content's Well 5" 11/23 05 to 11/27 05

Reported B/2

Depth	Character of Soil	Thickness	Elevation	Remarks	Starters .7	Perforated 1.85	Joints 1.85	Total No. of feet	Solder	Rivets	Acid	Charcoal	Date	Time
					←	Material					→		← Time	→
11	Water													
	Rich Alluvial Soil	5		Medium										
5														
	Fine Sand	19		[illegible] Soft									11/23	5/9
24														
	Blue Clay	13		[illegible] cased [illegible] Medium	1	2	12						11/24	1
37														
	Blue Clay	20		Bored 57 ft cased [illegible] Hard			6						11/25	1
57														
		10					1	41.4	3 lbs 5 lbs	100	.10	2 sack	11/27	6/9
67														
		67			1	2	20	41.4	3 lbs 5 lbs	100	.10	sack 46		2 5/9

10 ft to Water

22 Joints casing, casing 2 ft above ground to allow for raising of ground

1 Starter	.7
22 Joints 1.85 per Joint	40.7
	41.4

Well 67 ft deep

N.D Hack Well 6" 12/5 to 14/11 05

House "

Reported 14/16

Depth	Character of Soil	Thickness	Remarks	Starter 7'	Perforated 1.85'	Joints 1.85	Total No. of feet	Solder	Rivets	Acid	Charcoal	Date	Time
13	Water		[illegible]									12/5	5/9
0.0													
	Rich Alluvial Soil	8	Medium										
8													
	Fine Sand	6	Soft										
14													
	Fine Blue Sand	8	Soft										
			Bored 21 ft Cased 11 Joints	1	2	11	[illegible]					[illegible]	1
22													
	Blue Clay	64	Hard										
			Cased 20 Joints Bored 40 ft			7	37.7					13/7	1
86			Bored 66 ft									18/8	1
			Bored 80 ft									17/9	1
			Bored 86 ft			4	41.4					[illegible]	4/9
	86 ft deep 10 ft to Water		Total	1	4	20	41.4	3	100	10	1/2 47		5 [illegible]
			Above Surface				5						
			Below Surface				36.4						

N.D. Hack Tank Well 6" 13/11 to 14/18 05

Reported 1?/23 05

Depth	Character of Soil	Thickness	Remarks	Starter 7'	Perforated 1.85'	Joints 1.85'	Total No. of feet	Solder	Rivets	Acid	Charcoal	Date	Time
			Bore [illegible]					3½					
12	Water		Bored 7 ft									[illegible]	3/9
0.0													
	Rich Alluvial Soil	5	Medium										
5													
	Fine Sand	9	Soft										
14													
	Blue Clay	8	Medium	Bored 23 ft Cased 12 Joints	1	4	8	22.9				[illegible]	1
22													
	Blue Clay	76	Hard	Bored 43 ft Cased 14 Joints			4	45.1				[illegible]	1
98				Bored [illegible] Cased 25 Joints			1	47.0				[illegible]	1
	Sand		Soft	Bored 72 ft								[illegible]/15	1
				97 ft								[illegible]	1
				98 ft								[illegible]	1/9
				Total	1	4	13	47.	7¼	25	3/20	16		5 4/9
				Above Surface				2					
				Below				45.					

Well 98 ft deep
12 ft to Water

M.T. Hunt 6" Well 11/27, to 12/5, 05.

Reported 12/9

Depth	Character of Soil	Thickness	Remarks		Starter = 1'	Perforated = 1.85'	Joints = 1.85'	Total No. of feet	Solder 1 5/8 lbs	Rivets	Acid	Charcoal	Date	Time
				Bored 11/27										
				Contracted 11/27 Rec. 11/4			8							
13	Water				1	2	30		4					
				Trans to Hunt 11/6			5							
				Used	1	4	25		3					
	Rich Alluvial Soil	5	Medium											
5														
	Blue Clay	11	"	Bored 17ft 11/27									11/27	3/9
16														
	Sand	29	Soft	Bored 30ft 11/28 Cased 16 Joints	1	2	14	30.3					11/28	1
45				Bored 44' Cased 22 Joints			6	41.4					12/1	1
	Blue Clay	0.5	Hard											
45.5														
	Sand	3.5	Soft											
49														
	Blue Clay	31	Hard	Cased 27 Joints Bored 62 ft			5	50.7	3	125	2/.10	[illegible]	12/2	1
80				Bored 80ft 12/5									12/5	4/9
				Total	1	2	25	50.7	3	125	2/.10	[illegible] 47		3 9/9
				Above Surface				1.5						
				Below Surface				49.2						

Depth of Well 80 ft
" to Water 8½ "

Mrs. F. Myers Well

5"

12/18 to 12/20 . 19

Reported 12/30 05
" 7/10 06

Depth	Character of Soil	Thickness	Remarks		Starter 7'	Perforated 1.85'	Joints 1.85'	Total No. of feet	Solder	Rivets	Acid	Charcoal	Date	Time
12	Water													
0.0														
	Rich Alluvial Soil	3	Medium											
3														
	Fine Sand	12	medium											
15														
	Yellow Clay	22	Hard	Bored 31 ft Bored 37 Cased 15 feet	1	2	13	28.5					[illegible]	[illegible]
37														
	Sand		Soft											
				Bored 37 ft			2	22.2					[illegible]	[illegible]
				Feb 5 1906			1	34.0						
	Depth of Well 37 ft " to Water 12 "			Total	1	8	16	34.0	4	100	20	1SK		2 3/9
				Above Surface				3						
				Below "				31.0						

A.F. Williams 5" Well

Reported 1/6 06.

Depth	Character of Soil	Thickness		Remarks	Starter	Perforated	Joints	Total No. of Feet	Solder	Rivets	Acid	Charcoal	Date	Time
10	Water													
20														
	Rich Alluvial Soil	4	Medium											
4														
	Yellow Clay	62	Hard	Bored 18 ft									[illegible]	5/9
66				Bored 50 ft									[illegible]	1
	Blue Clay	3	"	Bored 68									[illegible]	1
69														
	Fine Sand	1.5	Soft											
70.5														
	Blue Clay	52.5	Hard	Bored 82 ft									[illegible]	1
123				" 105 ft									[illegible]	1
				" 110 ft									1/2	7/9
				[illegible] 123 ft	1	2	15	32.2					1/3	1
				[illegible] 12 Joints			12	53.4					[illegible]	5/9
	Depth of Well 123 ft													
	" to Water 10 ft													
				Total	1	2	27	53.4	12B	12.5	20	1.5 h		6 3/9
				Above Surface				2	3½ lb					
				Below				51.4						

Mrs. E. T. Merkley 8" Well 3/7 06 to [illegible] 06

Depth	Character of Soil	Thickness	Remarks	½ rdy / Day Adaptor	Perforated	Joints	Total No of Feet	Solder	Rivets (6 per jt)	Acid	Charcoal	Date	Time
			3/10 5-2H Wagon loads Gravel from {S P Car 57009}	1	2	29	58'				1 sk		
4'	water		2 Shovelfuls in Gravel										
0.0													
	Rich alluvial soil	4'											
4'													
	Blue clay mixed	32'											
36'	with fine sand												
	Fine sand mixed	18'										3/17	
	with gravel	20'									1 sk	3/24	
82'		8'										3/26	
	Gravel	6'										3/31	
100'	"	12'										4/7	
						22	44	5 bars	½ Pa	1 pt	½ sk	4/9	
				1	2	51	102	6¼"			2½ sk		

- 7 Joints over -
- 3 Bbls Cement
- 5 Wagon loads Gravel

0039

Report No. 9.

6" Well on Soto Estate April 30 May 3.

Depth	Character of Soil	Thickness	
00			
3'	Alluvial	3'	Water
23'	Fine Sand	20'	Soft
63'	Fine Sand and Gravel	40'	"
72'	Blue Clay	9'	Medium

Remarks	Date	Starters	Perforated	Joints	Total No. Feet	Solder lbs	Rivets	Acid	Charcoal	Time Hours
	4/30									5
	5/1									10
	5/2									10
	5/3.	1	2	26	58	6	1/4#	1/2pt	1sk.	10.
Totals		1	2	26	58	6	1/4#	1/2pt.	1sk	35

Total Time 3½ days.

Sacramento Southern R.R.
Mat'l Report N°1.

For week ending. Dec. 9/15.

Date	Name	Material
Dec. 8	M.T. Hunt	1/2 bbl. Lime
" 8	" " "	3 Pcs. Rgh' Red.wd 2"x12x14
" 9	" " "	20' - 1 1/2" Pipe
" 9	" " "	1 1/2" Coupler
" 8	J. H. Besch.	1/2 bbls. Lime Gray

Report of Well on Center Line at "S" 1175+50

Reported by Frank King, December 23, 1911.

Depth from natural ground to water		9^{0} ft.
" " water to bottom of well		126^{5}
	Total depth	155^{5} ft.

0042

33 double
61 single
Rivets

185
23
555
185
4255

On a 5" Caseing 6" rivets
" " 6" " 7" rivets
Any thing above 6". it takes
One rivet to the 1" in dia.

8 bolts 5/8 × 18-28 washers
2 [illegible] 6 × 6 × 18 Fredmond
8 [illegible] pins 4 × 4 × 22
16 " 1 × 6 × 16
2 × 3 × 20
[illegible] bolts 3/4 × 22 washers
2 " 6 × 8 × 28
4 3 × 6 × 28 Tank
4 3 × 8 28
16 bolts 1/2 × 4 washers

126
60
23
9
32
124

161
58
61
32
151

(8-29-02—1M)

2 G 131

SOUTHERN PACIFIC CO.

Engineer's Department.

Instructions to Engineers in Charge of Field Parties.

1. All Pay-Rolls and Vouchers are to be made out on the first day of each month, on the blanks furnished for that purpose, and forwarded to the Chief Engineer.

Give the Christian name and initial letter of a middle name on Payment Roll and Voucher.

Itemize all Vouchers, giving the date and place of disbursements; and when possible to do so, take receipt for all disbursements.

Time will be computed by calendar months and fractions of the same. A contribution of fifty cents will be expected from all employees (except Chinese) who have worked ~~five~~ 7 ~~(5)~~ days or more during each month and 25¢ for less than 7 days

2. No time will be allowed men absent on private business. No time will be allowed any of the party, excepting those placed on duty by the Chief of party until the work for which they were engaged shall commence: nor will any time be allowed after the evening of the last day's work, excepting to those detailed as Teamsters, Cooks, or for other duty by the Chief of party or his Agent. Give to men discharged a certificate of the time and amount due them.

3. All men will be returned free to the place at which they were engaged for any particular survey—excepting by agreement to the contrary—unless discharged for disobedience or incompetency, or leaving without the full consent of the Chief of party, in which case traveling expenses will not be allowed. Ten (10) days' notice will be required from all employees, in order to leave the service in good standing, unless this requirement be waived by the Engineer in charge.

In case of sickness of any member of party entitled to Hospital treatment, the Chief of party must give a Hospital Certificate.

4. Books, Stationery, Instruments, and other property of the Company are to be kept in good order; the Chief of the party will be charged for the same, and he must return them in like order in which they were received, or satisfactorily account for their damage or loss.

5. All requisitions must be sent to the Chief Engineer by letter and the telegraph is not to be used for that purpose, unless writing would occasion delay or loss.

6. Note on first page of every field book a full description of the particular route, line and work to which the notes relate, and enter date of each day's work in the proper place.

7. Note name and address in each Transit Book, of all members of the party; and in the Level Book, name and address of Leveler and Rodman.

8. A journal must be kept, fully describing each day's work, and noting all information of interest, and how it was derived.

9. Monthly reports must be sent to the Chief Engineer on the first day of each month, giving the lengths and descriptions of the various lines run, and all work done, with such other information as may come within the knowledge of the engineer in charge, of which the Chief Engineer should be informed.

WILLIAM HOOD,
CHIEF ENGINEER.

[illegible]

(3-20-02—1M)

2 G 200

SOUTHERN PACIFIC CO.
(PACIFIC SYSTEM.)

Engineering Department.

NSTRUCTIONS TO LEVELLERS.

1.—struments will be kept in adjustment, but dependence
for a rate work will be on equal back and foresights, where
prac ble to take them, or where taken of unequal lengths, it
mus compensated for in subsequent sights.

2. o sights on turning points are to be more than 300 feet
lon nd must be shorter where heat in the air, or other cause,
ma results of long sights inaccurate.

Leveller must read all sights on turning points himself, to
te , through the instrument or otherwise, trusting to the rod-
nly for the hundredths and thousandths of the reading.

Rodman will keep a check note-book of turning points.

-Leveller will check up his turning-point computations by
ences of back and foresight sums, and not depend on the
an's check notes.

—Intermediate elevations must be checked by difference of
tions and of rod readings before being platted on profiles.

—Rod must be swung back and forth on all backsights and
sights on turning points, to ensure getting the shortest pos-
e reading.

—Transverse slopes must always be taken at each station of
ey, and as much oftener as country requires.

—Take high water elevations frequently, of all water-courses,
e or small, search carefully for drift marks, and get all avail-
information from old residents.

).—On both preliminary and final surveys, when the line is
he valley of a water-course, large or small, with grade nearly
allel to the flood mark, the leveller will note elevation of
ter surface (or bottom of water-course, if dry) at least once
h quarter of a mile, and as much oftener as may be necessary
completely show the grade changes of the water-course. The
ults will be platted on all profiles, a dash (—) drawn at the
per elevation being used to indicate the water surface, or bed
water-course, and the usual dotted line being reserved for indi-
ing flood marks.

1.—Put in Bench Marks at least every half mile in valleys,
d every one thousand feet in hilly regions. Mark all benches
th the letter of the line and the elevation.

12.—Bench Marks must be turning points and not put in by
termediate sights. Their location must be fully described in
eld book.

13.—When connecting with another line, make full notes of the
lifference of elevations, and how much higher elevation of bench
s, by one set of levels than by the other.

14.—All level books must be paged and fully indexed.

0044